

RECEIVED  
AUG 28 2003  
TC 1700

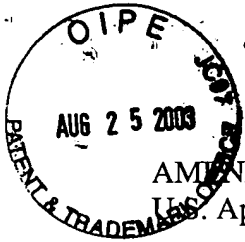
AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. 10/054,891

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended): A multicolor image-forming material comprising:
- an image-receiving sheet having an image-receiving layer; and
- at least four thermal transfer sheets each including a support, a light-to-heat converting layer and an image-forming layer, in which each of the thermal transfer sheets has a different color,
- wherein an image is formed by: superposing the image-forming layer in each of the at least four thermal transfer sheets on the image-receiving layer in the image-receiving sheet, in which the image-forming layer is opposed to the image-receiving layer; irradiating the image-forming layer in each of the at least four thermal transfer sheets with a laser beam; and transferring the irradiated area of the image-forming layer onto the image-receiving layer in the image-receiving sheet, ~~and~~
- each of the light-to-heat converting layers in the at least four thermal transfer sheets has a ratio of an optical density (OD) to a layer thickness:  $OD/layer\ thickness\ (\mu m\ unit)$  of 0.57 or more, and
- wherein the transferred image has a resolution of 2,400 dpi or more,
- the recording area of the multicolor image is a size of 515 mm or more multiplying 728 mm or more, ~~and~~



RECEIVED  
AUG 28 2003  
TC 1700

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appl. 10/054,891

b1  
each of the image-forming layers in the at least four thermal transfer sheets has a ratio of an optical density (OD) to a layer thickness: OD/layer thickness ( $\mu\text{m}$  unit) of 1.50 or more,  
the image-forming layer is provided directly on the light-to-heat converting layer, and  
the light-to-heat converting layer contains a matting agent having a particle size of 0.3 to 30  $\mu\text{m}$ .

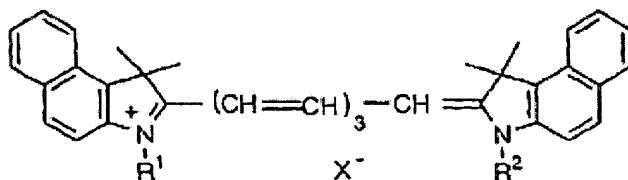
b2  
2. (currently amended): The multicolor image-forming material as claimed in claim 1, wherein the OD/layer thickness ( $\mu\text{m}$  unit) of each of the light-to-heat converting layers in the at least four thermal transfer sheets is 1.95 or more.

3. (currently amended): The multicolor image-forming material as claimed in claim 1, wherein the OD/layer thickness ( $\mu\text{m}$  unit) of each of the light-to-heat converting layers in the at least four thermal transfer sheets is 4.01 or more.

4. (original): The multicolor image-forming material as claimed in claim 1, wherein the light-to-heat converting layer contains a light-to-heat converting material and the light-to-heat converting material is at least one of an organic dye and a carbon black, in which the organic dye is selected from the group consisting of a cyanine dye, an anthraquinone dye, an azulene dye and a phthalocyanine dye.

5. (original): The multicolor image-forming material as claimed in claim 4, wherein the cyanine dye is an indolenine dye.

6. (original): The multicolor image-forming material as claimed in claim 4, wherein the organic dye has a structure represented by formula:



wherein R<sup>1</sup> and R<sup>2</sup>, which are the same or different, each independently represents an alkyl group, an alkenyl group, or an aryl group; X represents an anion; and the naphthalene ring may be substituted or unsubstituted.

7. (original): The multicolor image-forming material as claimed in claim 1, wherein the at least four thermal transfer sheets have four or more colors including yellow, magenta, cyan and black, and each of the at least four thermal transfer sheets has a different color, and each of the light-to-heat converting layers in the at least four thermal transfer sheets has a different optical density per the light-to-heat converting layer, in which each of the light-to-heat converting layers in the at least four thermal transfer sheets each having a different color has the same optical density per unit thickness of the light-to-heat converting layer and has a different layer thickness.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. 10/054,891

8. (original): The multicolor image-forming material as claimed in claim 7, wherein each of the light-to-heat converting layers in the at least four thermal transfer sheets each having a different color is formed with the same coating solution.

9. (original): The multicolor image-forming material as claimed in claim 7, wherein the light-to-heat converting layer in the black thermal transfer sheet has the lowest optical density in the at least four thermal transfer sheets.

10. (original): The multicolor image-forming material as claimed in claim 7, wherein the image-receiving sheet includes a support, and each of the light-to-heat converting layers in the at least four thermal transfer sheets each having a different color contains a matting agent in a different amount.

11. (original): The multicolor image-forming material as claimed in claim 10, wherein each of the light-to-heat converting layers in the at least four thermal transfer sheets each having a different color has the same content of the matting agent per unit thickness of the light-to-heat converting layer and has a different layer thickness.

12. (original): The multicolor image-forming material as claimed in claim 10, wherein each of the light-to-heat converting layers in the at least four thermal transfer sheets each having a different color is formed with the same coating solution.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appl. 10/054,891

13. (original): The multicolor image-forming material as claimed in claim 10, wherein the light-to-heat converting layer in the black thermal transfer sheet has the lowest content of the matting agent in the at least four thermal transfer sheets.

14. (original): The multicolor image-forming material as claimed in claim 7, wherein the light-to-heat converting layer has an optical density of from 0.80 to 1.49 at peak wavelength of the laser beam.

15. (original): The multicolor image-forming material as claimed in claim 7, wherein the light-to-heat converting layer contains a light-to-heat converting agent and the light-to-heat converting agent is a compound other than carbon black, graphite and colloidal silver.

16. (original): The multicolor image-forming material as claimed in claim 15, wherein the light-to-heat converting agent is a cyanine dye.

17. (original): The multicolor image-forming material as claimed in claim 1, wherein the light-to-heat converting layer contains a light-to-heat converting material and a resin, and the half value width of the maximum absorbance at wavelength of 700 to 1,200 nm of the light-to-heat converting layer is 200 nm or less.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. 10/054,891

18. (original): The multicolor image-forming material as claimed in claim 17, wherein the thermal transfer sheet includes an intermediate layer between the light-to-heat converting layer and the image-forming layer.

19. (original): The multicolor image-forming material as claimed in claim 17, wherein the light-to-heat converting material is an infrared absorbing dye.

20. (original): The multicolor image-forming material as claimed in claim 19, wherein the infrared absorbing dye is a cyanine dye.

21. (original): The multicolor image-forming material as claimed in claim 17, wherein irradiation is performed with a laser having an output of 50 mW or more at linear velocity of 7 m/s or more.

22. (original): The multicolor image-forming material as claimed in claim 1, wherein each of the light-to-heat converting layer and the image-forming layer contains a water-insoluble resin and the recorded image has a resolution of 2,400 dpi or more.

23. (original): The multicolor image-forming material as claimed in claim 22, wherein the resin in the light-to-heat converting layer is soluble in a hydrophobic solvent having an SP value of from 16 to 22.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. 10/054,891

24. (original): The multicolor image-forming material as claimed in claim 22, wherein the resin in the image-forming layer is soluble in a nonaqueous solvent having an SP value of from 16 to 30.

25. (original): The multicolor image-forming material as claimed in claim 22, wherein a hydrophobic solvent is used for dissolving the resin when the light-to-heat converting layer is provided, and a nonaqueous solvent is used for solving the resin when the image-forming layer is provided.

26. (original): The multicolor image-forming material as claimed in claim 22, wherein the light-to-heat converting material in the light-to-heat converting layer has the solubility of 1 weight% or less in a coating solvent for forming the image-forming layer.

27. (original): The multicolor image-forming material as claimed in claim 22, wherein the resin in the light-to-heat converting layer has the solubility of 1 weight% or less in a coating solvent for forming the image-forming layer.

28. (original): The multicolor image-forming material as claimed in claim 22, wherein the resin in the light-to-heat converting layer has the solubility of 0.1 weight% or more in the coating solvent for forming the light-to-heat converting layer.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. 10/054,891

29. (original): The multicolor image-forming material as claimed in claim 22, wherein the light-to-heat converting material has the solubility of 0.1 weight% or more in the coating solvent for forming the light-to-heat converting layer.

30. (original): The multicolor image-forming material as claimed in claim 22, wherein the light-to-heat converting material is an infrared absorbing dye.

31. (original): The multicolor image-forming material as claimed in claim 22, wherein the resin of the image-forming layer has the solubility of 0.1 weight% or more in the coating solvent for forming the image-forming layer.

32. (original): The multicolor image-forming material as claimed in claim 22, wherein the thermal transfer sheet includes an intermediate layer between the light-to-heat converting layer and the image-forming layer.

33. (canceled).

34. (previously presented): The multicolor image-forming material as claimed in claim 1, wherein the transferred image has a resolution of 2,600 dpi or more.

35. (canceled).



AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appl. 10/054,891

36. (previously presented): The multicolor image-forming material as claimed in claim 1, wherein the recording area of the multicolor image is a size of 594 mm or more multiplying 841 mm or more.

37. (canceled).

---

B3 38. (currently amended): The multicolor image-forming material as claimed in claim 1, wherein the OD/layer thickness ( $\mu\text{m}$  unit) of each of the image forming layers in the at least four thermal transfer sheets is 1.80 or more.

---

B4 39. (currently amended): The multicolor image-forming material as claimed in claim 38, wherein the OD/layer thickness of each of the image-forming layers in the at least four thermal transfer sheets ( $\mu\text{m}$  unit) is 2.50 or more.

---

40. (original): The multicolor image-forming material as claimed in claim 1, wherein the image-forming layer in each of the at least four thermal transfer sheets and the image-receiving layer in the image-receiving sheet each has a contact angle with water of from 7.0 to 120.0°.

41. (original): The multicolor image-forming material as claimed in claim 1, wherein the ratio of an optical density (OD) of the image-forming layer in each of the at least four thermal transfer sheets to a thickness of the image-forming layer: OD/layer thickness ( $\mu\text{m}$  unit) is

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appl. 10/054,891

1.80 or more and the image-receiving layer in the image-receiving sheet has a contact angle with water of 86° or less.

42. (original): A method for manufacturing the multicolor image-forming material as claimed in claim 1, which comprises performing a successive coating.

---

43. (original): A method for forming a multicolor image, which comprises the steps of:

85  
preparing: an image-receiving sheet having an image-receiving layer; and at least four thermal transfer sheets each including a support, a light-to-heat converting layer and an image-forming layer, in which each of the at least four thermal transfer sheets has a different color, and each of the light-to-heat converting layers in the at least four thermal transfer sheets has a ratio of an optical density (OD) to a layer thickness: OD/layer thickness ( $\mu\text{m}$  unit) of 0.57 or more, the recording area of the multicolor image is a size of 515 mm or more multiplying 728 mm or more, and the light-to-heat converting layer contains a matting agent having a particle size of 0.3 to 30  $\mu\text{m}$ ;

superposing the image-forming layer in each of the at least four thermal transfer sheets on the image-receiving layer in the image-receiving sheet, in which the image-forming layer is opposed to the image-receiving layer;

irradiating the image-forming layer in each of the at least four thermal transfer sheets from the side of the support with a laser beam; and

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. 10/054,891

65 transferring the irradiated area of the image-forming layer onto the image-receiving layer  
in the image-receiving sheet to record an image,

wherein the irradiated area of the image-forming layer is transferred onto the image-receiving sheet in a thin film.

---

44. (original): The method for forming a multicolor image as claimed in claim 43,  
wherein the laser beam is a semi-conductor laser beam.

45. (original): The method for forming a multicolor image as claimed in claim 43,  
wherein the laser beam comprises multi-beams of two-dimensional array.

---

46. (original): A method for preparing a color proof, which comprises:  
preparing: an image-receiving sheet having an image-receiving layer; and at least four  
thermal transfer sheets each including a support, a light-to-heat converting layer and an image-  
forming layer, in which each of the at least four thermal transfer sheets has a different color, and  
each of the light-to-heat converting layers in the at least four thermal transfer sheets has a ratio of  
an optical density (OD) to a layer thickness: OD/layer thickness ( $\mu\text{m}$  unit) of 0.57 or more, the  
recording area of the multicolor image is a size of 515 mm or more multiplying 728 mm or more,  
and the light-to-heat converting layer contains a matting agent having a particle size of 0.3 to 30  
 $\mu\text{m}$ ;

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. 10/054,891

superposing the image-forming layer in each of the at least four thermal transfer sheets on the image-receiving layer in the image-receiving sheet, in which the image-forming layer is opposed to the image-receiving layer;

irradiating the image-forming layer in each of the at least four thermal transfer sheets from the side of the support with a laser beam;

transferring the irradiated area of the image-forming layer onto the image-receiving layer in the image-receiving sheet to record a full color image, wherein the irradiated area of the image-forming layer is transferred onto the image-receiving sheet in a thin film; and

transferring the full color image on the image-receiving layer onto an actual printing paper.

---

47. (canceled).